

C¹
A diffusion plate or disc or glass (hereinafter "diffusion glass") or one or more light diffusing gratings are incorporated into the pupil plane (aperture space) of the imaging optical system. Their function is to be seen in that they scatter diffusely as incoherent background into the image plane information likewise present at each location in the pupil, spatially the sum of the spectral intensities and local frequency values which are irradiated into the pupil by all objects in the object space and contribute to optical imaging. As a result, each local image location is supported by the global information on the entire field of view, against which each local pixel must stand out by being differentiated from it, specifically in brightness, hue, saturation etc. However, each item of local information thereby remains relativized in terms of the global background of the entire field of view.

In the Claims:

Please amend the claims by replacing the indicated claims with the following clean versions. The changes are shown explicitly in Appendix B.

C²
1. (Twice Amended) A grating optical sensor comprising: a lens imaging an object space; a diffractive hexagonal 3D grating optical modulator in the image plane of the lens to form at least one trichromatic RGB diffraction pattern; a photoelectric receiver arrangement arranged in the near field downstream of the modulator, having individual receivers configured to generate electric signals in accordance with centrosymmetrically trichromatic RGB diffraction orders of the diffraction pattern; an evaluation device for the electric signals generated by the individual receivers; and at least one light-diffusion plate arranged in either a pupillary plane of the lens or a pupillary plane conjugate to the lens or both.

2. (Twice Amended) The grating optical sensor as claimed in claim 1, wherein the light-diffusion plate has a grating structure.

3. (Twice Amended) The grating optical sensor as claimed in claim 1, wherein the plate has a diffusion characteristic selected so as to produce an image of the object space with uniformly superimposed background radiation from the object space.